

RGRF18S optical level switch

The RGRF18S of Riels@Instruments is a compact optical level switch which is characterized mainly by its extremely simple commissioning. The proven technology of the energetic photoelectric proximity sensor from Riels@Instruments is the foundation for the sensor. This allows for easy, rugged and reliable sensor construction.

Thanks to the use of high-quality materials such as stainless steel 316L and polysulfone as well as the housing design in enclosure rating IP69, the RGRF18S guarantees high process reliability, even under harsh ambient conditions outside the tank. Quick and problem-free commissioning, without medium calibration, reduces not only commissioning costs, but also maintenance. Due to the optical technology, the RGRF18S is particularly well-suited for water-based media.

At a glance

- Robust level monitoring in liquid without additional requirements
- Small, compact design; no medium calibration required
- Process temperature up to 55°C, process pressure up to 16 bar
- IP 67 and IP 69 enclosure rating
- Process connection G $\frac{1}{2}$
- Highly medium resistant due to stainless steel housing 316L polysulfone apex
- Output available as PNP or NPN transistor
- FDA-compliant, UL

Your benefits

- Small, compact sensor ideal for difficult installation conditions with limited space
- Quick commissioning without medium calibration saves time and money
- No moving mechanical parts reduce maintenance and eliminate the need to recalibrate -- even after long periods of use.

Features

Medium	Fluids
Measurement	switch
Process pressure	-0.5 bar÷16 bar
Process temperature	-25°C÷55°C
UL approval	√
Light source	LED
Type of light	Red light
Wavelength	650 nm

Mechanical data

Housing material	Stainless steel 316L
Process connection	G 1/2
Wetted parts	Stainless steel 316L, polysulfon, FPM

Electrical data

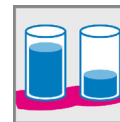
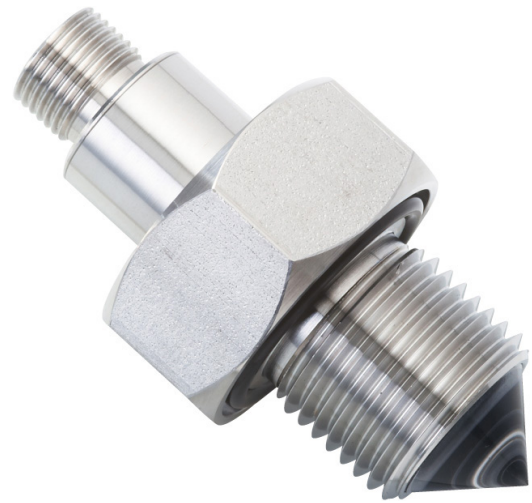
Supply voltage	10 V DC÷30 V DC ¹⁾
Ripple	≤ 5 V _{pp} ²⁾
Power consumption	≤ 30 mA at 24 V without output load
Output signal	1x PNP ³⁾
Connection type	M12x1, 4-pin
Response time	10 ms
Signal voltage HIGH	V _s - 3 V
Signal voltage LOW	≤ 3 V
Output current	≤ 100 mA ⁴⁾
Switching frequency	250 Hz ⁵⁾
Enclosure rating	IP 67: EN 60529, IP 69: EN 40050
Protection class	III
Switching output	NO

¹⁾ V_s connections reverse-polarity protected

²⁾ May not exceed or fall short of V_s tolerances

³⁾ ⁴⁾ Output overcurrent and short-circuit protected

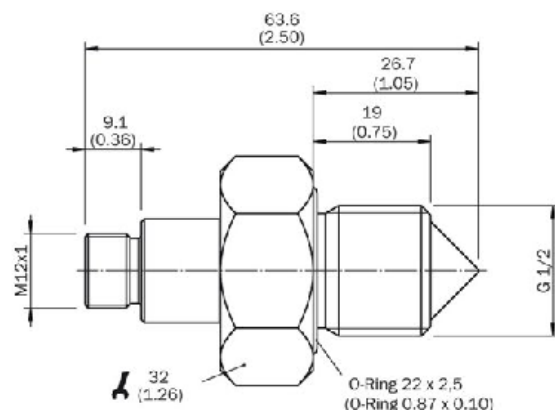
⁵⁾ With light/dark ratio 1:1



Ambient data

Ambient temperature, operation	-25 °C÷55 °C
Ambient temperature, storage	-25 °C÷70 °C

Dimensional drawing



Dimensions in mm (inch)

Connection type



Connection diagram

